

Appl. No. 10/820,856
Amendment dated: January 28, 2008
Reply to OA of: October 29, 2007

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1(previously presented). An under bump metallization structure applicable to be disposed on bonding pads of a semiconductor wafer, wherein a passivation layer covers the wafer and exposes the bonding pads, the under bump metallization structure comprising:

- an adhesive layer formed on the bonding pads;
- a first barrier layer disposed on the adhesive layer;
- a wetting layer formed on the first barrier layer; and
- a second barrier layer disposed on the wetting layer, wherein a material of the second barrier comprises tin and copper, wherein the tin and copper of the second barrier layer are not fully reacted with each other and wherein the quantity of copper is larger than that of tin.

2(canceled).

3(original). The structure of claim 1, wherein the first barrier layer is a nickel-vanadium layer.

4(original). The structure of claim 1, wherein the wetting layer is a copper layer.

Claims 5-6(canceled).

7(original). The structure of claim 1, wherein the thickness of the second barrier layer is ranged from about 50 μm to about 80 μm .

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Claims 8-19(canceled).

20(previously presented). The structure of claim 1, wherein the tin and copper of the second barrier layer are present in the barrier layer at the time of disposing the second barrier layer on the wetting layer.

21(previously presented). The structure of claim 1, further comprising a solder bump disposed on the second barrier layer, wherein the solder bump comprises tin and the tin of the second barrier layer is not from the tin of the solder bump.

22(new). An under bump metallization structure applicable to be disposed on bonding pads of a semiconductor wafer, wherein a passivation layer covers the wafer and exposes the bonding pads, the under bump metallization structure comprising:

- an adhesive layer formed on the bonding pads;
- a first barrier layer disposed on the adhesive layer;
- a wetting layer formed on the first barrier layer; and
- a second barrier layer disposed on the wetting layer, wherein a material of the second barrier comprises a tin-copper alloy, wherein the tin-copper alloy of the second barrier layer are not fully reacted with each other and wherein the quantity of copper is larger than that of tin.

23(new). The structure of claim 22, wherein the thickness of the second barrier layer is ranged from about 50 μm to about 80 μm .

24(new). The structure of claim 1, wherein the first barrier layer is a nickel-vanadium layer and the wetting layer is a copper layer.

25(new). The structure of claim 22, wherein the first barrier layer is a nickel-

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vanadium layer and the wetting layer is a copper layer.

26(new). The structure of claim 25, wherein the thickness of the second barrier layer is ranged from about 50 μm to about 80 μm .